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43

<110> Heston, Warren D.W.  
O'Keefe, Denise S.

<120> DNA Encoding the Prostate-Specific Membrane  
Antigen-Like Gene and Uses Thereof

<130> D6230

<140> USSN 09/973,382  
<141> 2001-10-09

<150> PCT/US00/09417  
<151> 2000-04-09

<160> 38

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<212> DNA  
<213> *Homo sapiens*

<220>  
<223> cDNA sequence of PSMA-like gene

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          35                      40                      45
Arg Ile Tyr Asn Val Ile Gly Thr Leu Arg Gly Ala Val Glu Pro
          50                      55                      60
Asp Arg Tyr Val Ile Leu Gly Gly His Arg Asp Ser Trp Val Phe
          65                      70                      75
Gly Gly Ile Asp Pro Gln Ser Gly Ala Ala Val Val His Glu Thr
          80                      85                      90
Val Arg Ser Phe Gly Thr Leu Lys Lys Glu Gly Trp Arg Pro Arg
          95                     100                     105
Arg Thr Ile Leu Phe Ala Ser Trp Asp Ala Glu Glu Phe Gly Leu
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Leu Gly Ser Thr Glu Trp Ala Glu Asp Asn Ser Arg Leu Leu Gln
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Val Tyr Asn Leu Thr Lys Glu Leu Lys Ser Pro Asp Glu Gly Phe	170	175	180
Glu Gly Lys Ser Leu Tyr Glu Ser Trp Thr Lys Lys Ser Pro Ser	185	190	195
Pro Glu Phe Ser Gly Met Pro Arg Ile Ser Lys Leu Gly Ser Gly	200	205	210
Asn Asp Phe Glu Val Phe Phe Gln Arg Leu Gly Ile Ala Ser Gly	215	220	225
Arg Ala Arg Tyr Thr Lys Asn Trp Glu Thr Asn Lys Phe Ser Gly	230	235	240
Tyr Pro Leu Tyr His Ser Val Tyr Glu Thr Tyr Glu Leu Val Glu	245	250	255
Lys Phe Tyr Asp Pro Met Phe Lys Tyr His Leu Thr Val Ala Gln	260	265	270
Val Arg Gly Gly Met Val Phe Glu Leu Ala Asn Ser Ile Val Leu	275	280	285
Pro Phe Asp Cys Arg Asp Tyr Ala Val Val Leu Arg Lys Tyr Ala	290	295	300
Asp Lys Ile Tyr Asn Ile Ser Met Lys His Pro Gln Glu Met Lys	305	310	315
Thr Tyr Ser Leu Ser Phe Asp Ser Leu Phe Ser Ala Val Lys Asn	320	325	330
Phe Thr Glu Ile Ala Ser Lys Phe Ser Glu Arg Leu Gln Asp Phe	335	340	345
Asp Lys Ser Asn Pro Ile Leu Leu Arg Met Met Asn Asp Gln Leu	350	355	360
Met Phe Leu Glu Arg Ala Phe Ile Asp Pro Leu Gly Leu Pro Asp	365	370	375
Arg Pro Phe Tyr Arg His Val Ile Tyr Ala Pro Ser Ser His Asn	380	385	390

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Asp Ile Glu Ser Lys Val Asp Pro Ser Lys Ala Trp Gly Asp Val  
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<220>  
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              35                      40                      45
Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala
              50                      55                      60

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Gln	Leu	Ala	Lys	Gln	Ile	Gln	Ser	Gln	Trp	Lys	Glu	Phe	Gly	Leu
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Asp	Ser	Val	Glu	Leu	Ala	His	Tyr	Asp	Val	Leu	Leu	Ser	Tyr	Pro
				110					115					120
Asn	Lys	Thr	His	Pro	Asn	Tyr	Ile	Ser	Ile	Ile	Asn	Glu	Asp	Gly
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Asn	Glu	Ile	Phe	Asn	Thr	Ser	Leu	Phe	Glu	Pro	Pro	Pro	Pro	Gly
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Tyr	Glu	Asn	Val	Ser	Asp	Ile	Val	Pro	Pro	Phe	Ser	Ala	Phe	Ser
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Pro	Gln	Gly	Met	Pro	Glu	Gly	Asp	Leu	Val	Tyr	Val	Asn	Tyr	Ala
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Arg	Thr	Glu	Asp	Phe	Phe	Lys	Leu	Glu	Arg	Asp	Met	Lys	Ile	Asn
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Gly	Tyr	Pro	Ala	Asn	Glu	Tyr	Ala	Tyr	Arg	Arg	Gly	Ile	Ala	Glu
				275					280					285
Ala	Val	Gly	Leu	Pro	Ser	Ile	Pro	Val	His	Pro	Ile	Gly	Tyr	Tyr
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Asp	Ala	Gln	Lys	Leu	Leu	Glu	Lys	Met	Gly	Gly	Ser	Ala	Pro	Pro
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Pro	Gly	Phe	Thr	Gly	Asn	Phe	Ser	Thr	Gln	Lys	Val	Lys	Met	His
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Thr	Leu	Arg	Gly	Ala	Val	Glu	Pro	Asp	Arg	Tyr	Val	Ile	Leu	Gly
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Gly	His	Arg	Asp	Ser	Trp	Val	Phe	Gly	Gly	Ile	Asp	Pro	Gln	Ser
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Gly	Ala	Ala	Val	Val	His	Glu	Ile	Val	Arg	Ser	Phe	Gly	Thr	Leu
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Lys	Lys	Glu	Gly	Trp	Arg	Pro	Arg	Arg	Thr	Ile	Leu	Phe	Ala	Ser
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Trp	Asp	Ala	Glu	Glu	Phe	Gly	Leu	Leu	Gly	Ser	Thr	Glu	Trp	Ala
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Glu	Glu	Asn	Ser	Arg	Leu	Leu	Gln	Glu	Arg	Gly	Val	Ala	Tyr	Ile
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Asn	Ala	Asp	Ser	Ser	Ile	Glu	Gly	Asn	Tyr	Thr	Leu	Arg	Val	Asp
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Cys	Thr	Pro	Leu	Met	Tyr	Ser	Leu	Val	His	Asn	Leu	Thr	Lys	Glu
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Leu	Lys	Ser	Pro	Asp	Glu	Gly	Phe	Glu	Gly	Lys	Ser	Leu	Tyr	Glu
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Arg	Ile	Ser	Lys	Leu	Gly	Ser	Gly	Asn	Asp	Phe	Glu	Val	Phe	Phe
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Gln	Arg	Leu	Gly	Ile	Ala	Ser	Gly	Arg	Ala	Arg	Tyr	Thr	Lys	Asn
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Met	Lys	His	Pro	Gln	Glu	Met	Lys	Thr	Tyr	Ser	Val	Ser	Phe	Asp
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Ser	Leu	Phe	Ser	Ala	Val	Lys	Asn	Phe	Thr	Glu	Ile	Ala	Ser	Lys
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Leu	Arg	Met	Met	Asn	Asp	Gln	Leu	Met	Phe	Leu	Glu	Arg	Ala	Phe
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				710					715					720
Pro	Ser	Lys	Ala	Trp	Gly	Glu	Val	Lys	Arg	Gln	Ile	Tyr	Val	Ala
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<223> antisense oligonucleotide primer based upon  
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regions of the PSMA-like gene (exons 5-6)

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aaactgagac	tcagataggc tg	22
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<213>	Artificial sequence	
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<223>	sense oligonucleotide primer based upon intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 11)	
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ctgggcttgg	tagtgtcctg gg	22
<210>	22	
<211>	24	
<212>	DNA	
<213>	Artificial sequence	

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
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 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 11)

<400> 22  
 gcttggcaaa caagtcctgg ctac 24

<210> 23  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 12)

<400> 23  
 tgtcgtaaat atgggtcagc tc 22

<210> 24  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
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 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 12)

<400> 24  
 ttaactagac tgctgctcct ag 22

<210> 25  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence

<220>  
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intronic sequences of the PSMA genomic clone used to amplify the corresponding regions of the PSMA-like gene (exon 13)

<400> 25  
tggttaggaat ttagcagtg tc

22

<210> 26  
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<220>  
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<400> 26  
gatgctacta atgggctacc tc

22

<210> 27  
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<220>  
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<400> 27  
cttctgggta atggacatct ag

22

<210> 28  
<211> 22  
<212> DNA  
<213> Artificial sequence

<220>  
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<400> 28  
 caatcccaca ctgaattcag tg 22  
  
 <210> 29  
 <211> 22  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
 <221> primer\_bind  
 <223> sense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 15)

<400> 29  
 agaatggggt ttagtttaat gg 22  
  
 <210> 30  
 <211> 21  
 <212> DNA  
 <213> Artificial sequence  
  
 <220>  
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 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 15)

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 <210> 31  
 <211> 22  
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 <220>  
 <221> primer\_bind  
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 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exons 16-17)

<400> 31  
 ttgtaagcta tccctataag ag 22



<210>	32	
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<210>	34	
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<210>	35	
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<212>	DNA	
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 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 19)

<400> 35  
 atccaggaat tgcagagtgc tc 22

<210> 36  
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 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense oligonucleotide primer based upon  
 intronic sequences of the PSMA genomic  
 clone used to amplify the corresponding  
 regions of the PSMA-like gene (exon 19)

<400> 36  
 ttcagtttta atccataggg ag 22

<210> 37  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> sense primer (exon 10) used for performing  
 PCR on cDNAs from various tissues

<400> 37  
 acagatatgt cattctggga ggtc 24

<210> 38  
 <211> 24  
 <212> DNA  
 <213> Artificial sequence

<220>  
 <221> primer\_bind  
 <223> antisense primer (exon 16) used for  
 performing PCR on cDNAs from various  
 tissues

<400> 38  
actgtgatac agtggatagc cgct

24